

TM-4DPI

4-Wire Universal Transmitter

- › 4-wire universal input
- › Current/voltage output
- › Universal power supply
- › Isolated
- › Simple USB programming



Universal input

<i>Thermocouple</i>	B, E, K, J, N, R, S, T or custom type
<i>RTD</i>	Pt100/Pt1000
<i>mA</i>	0/4–20mA
<i>V</i>	10–0V, +10––10V
<i>mV</i>	100–0mV
<i>Potentiometer</i>	2kΩ–1MΩ

Current or voltage output

<i>mA</i>	0–20mA, 20–0mA, 4–20mA, 20–4mA
<i>V</i>	0–10V, 10–0V, +10––10V, –10–+10V

Supply voltage 85–265V AC, 20–72V DC

Operating temperature –10–+60°C

Isolation voltage 2.3kV AC (test), 250V AC (operation)

Temperature coefficient $\leq \pm 0.01\%$ of span/°C

Maximum load 650Ω. Load stability $\leq 0.01\%$ of span/100Ω.

Response time 0–90%, 100–10% <1sec

Resolution 0.5μA

Accuracy $\leq \pm 0.1\%$ of span

LED indication for sensor errors (3.8mA, 21.5mA). LED flashing = normal operation, LED on = fault.

Potentiometer for fine offset adjustment of current output

32-point flexible linearization may be applied to current/voltage inputs

DIN rail mountable unit, dimensions 79 x 30 x 75mm (HxWxD). Fits 35mm DIN rail (not included).

TM-2HL & TM-2HLI*

2-Wire Temperature Transmitters

- › 2-wire temperature input
- › Current output
- › Loop powered
- › Isolated or non-isolated
- › Simple USB programming



(Temperature probe not included)

Current output 4–20mA or 20–4mA

Supply voltage 36V max, (loop input signal)

Operating temperature –20–+65°C

RTD input Pt100/Pt1000, 3-wire (or 2-wire with offset calibration)

Sensor current 0.15mA nominal

Accuracy $\leq 0.3^\circ\text{C}$

Lead resistance Pt100: 10Ω/wire max

Pt1000: 5Ω/wire max

(0.02% fso offset error per Ω)

Linearity Pt100 0.02% fso for $\leq 200^\circ\text{C}$; 0.1% fso for $\leq 850^\circ\text{C}$

Pt1000 0.02% fso for $\leq 200^\circ\text{C}$; 0.2% fso for $\leq 520^\circ\text{C}$

USB programmable zero 0–±99% of span

Head mounting unit, dimensions 44 x 44 x 23mm (HxWxD)

Features unique to isolated model (TM-2HLI)

★ **Thermocouple input** B, E, J, K, N, R, S, T types

Input impedance 1MΩ min

Lead resistance 100Ω max

Cold junction –20–+90°C

Accuracy E, J, K, N, T: $< \pm 1^\circ\text{C}$

B, R, S: $< \pm 2^\circ\text{C}$

Temp. drift E, J, K, N, T: $< \pm 0.05^\circ\text{C}$

B, R, S: $< \pm 0.2^\circ\text{C}$

CJC error $< \pm 1^\circ\text{C}$

★ **Isolation voltage** 250V AC (operation)

★ **LED indication** for sensor errors. Flashing = normal, On = fault.

★ **Potentiometer** for fine offset adjustment of current output



Transmitters

Transmit without the headaches.

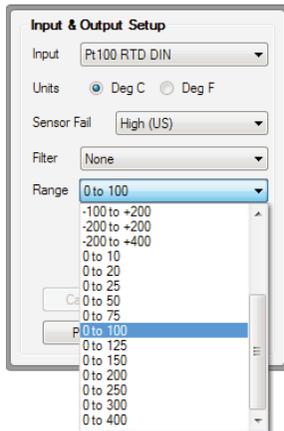


Ten reasons why you'll wish you had discovered us sooner...

- 1 Easy programming in seconds, using our reusable USB programming kit and simple Windows software

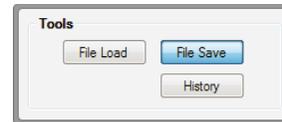
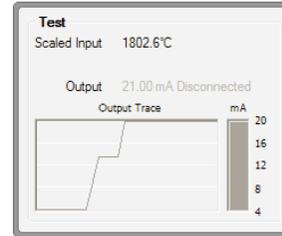
Download it FREE from
www.defineinstruments.com/tmsetup

- 2 No power supply or input signal required to set up or adjust range
- 3 Scale without recalibrating
- 4 Both of our DIN-mount units feature universal inputs, simplifying your product range
- 5 Our 4-wire transmitter can be powered by either 24V DC or 230V AC
- 6 High quality New Zealand made products offering high accuracy measurement (+5 Year Warranty*)



- 7 Designed to withstand harsh EMC environments
- 8 Easily select your input and output type and range, with just a click of the mouse

- 9 View live data to confirm that your setup is correct (ideal for commissioning!)
- 10 Load your saved configuration settings, to quickly program additional transmitters



TM-2HLI with Bridge Key programmer (sold separately)

* Warranty does not apply to equipment that has been subjected to misuse, negligence or accident. Other conditions apply - for full details see our website.

TM-2DLI 2-Wire Universal Transmitter



- › 2-wire universal input
- › Current output
- › Loop powered
- › Isolated
- › Simple USB programming

Universal input

<i>Thermocouple</i>	B, E, K, J, N, R, S, T or custom type
<i>RTD</i>	Pt100/Pt1000
<i>mA</i>	0/4–20mA
<i>V</i>	+1–1V, +10–10V
<i>mV</i>	+100–100mV
<i>Potentiometer</i>	1–10kΩ

Current output 4–20mA or 20–4mA

Supply voltage 36V max, powered by loop input signal

Isolation voltage 2.3kV AC (test), 250V AC (operation)

Operating temperature -20–+80°C

Temperature coefficient ≤±0.01% of span/°C

Maximum load 1200Ω (at 20mA with 36V input). Load stability ≤0.01% of span/100Ω. Output load resistance 50Ω/V above 10.5V.

Response time 0–90%, 100–10% <1sec

Resolution 0.5μA

Accuracy ±±0.1% of span

LED indication for sensor errors (3.8mA, 21.5mA). LED flashing = normal operation, LED on = fault.

Potentiometer for fine offset adjustment of current output

32-point flexible linearization may be applied to current/voltage inputs

DIN rail mountable unit, dimensions 79 x 20 x 75mm (HxWxD). Fits 35mm DIN rail (not included).



www.defineinstruments.com

P +64 9 835 1550

E sales@defineinstruments.com